



STS-78 crew returns home with a mountain of data for JSC and other scientists. Story on Page 3.



JSC harvests lettuce grown in pressure equivalent to 10,000 feet that may be used for life support. Photo on Page 4.

# Space News Roundup

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## Employee Express goes on line

The new Employee Express—a system that gives civil service employees the ability to process payroll transactions over the phone—is now operational and employees will be receiving their personal identification numbers this month.

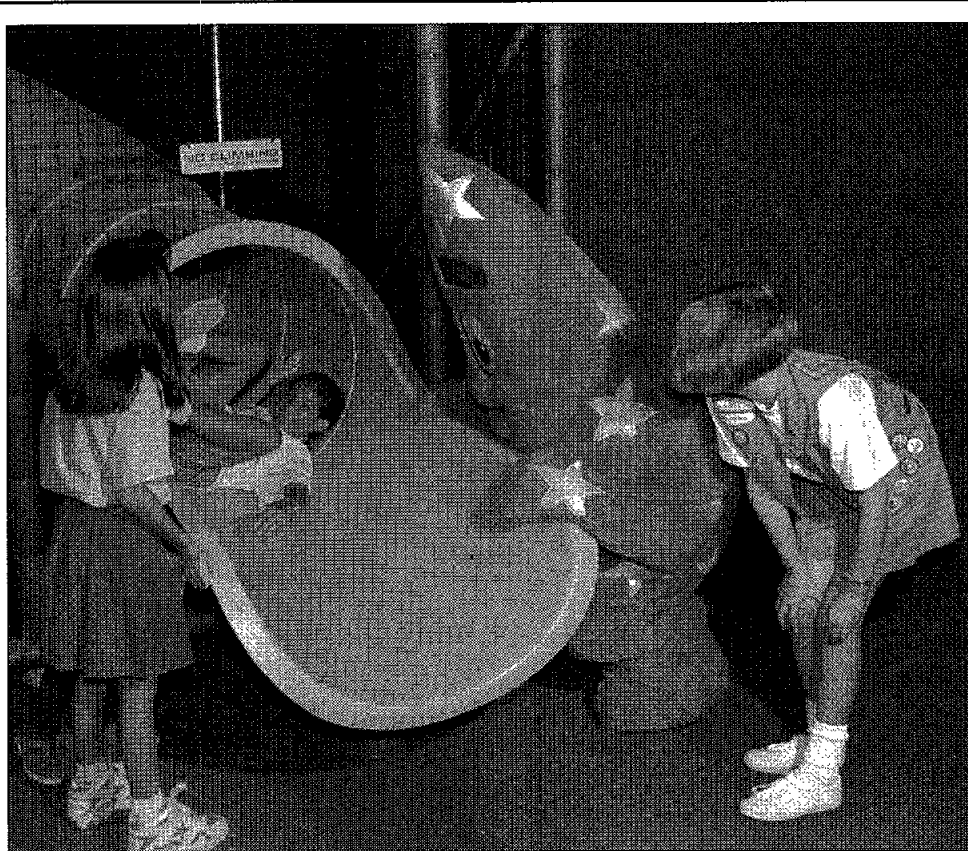
Employees will be able to access Employee Express from a touch tone phone at work (912) 757-3169 or from home 1-800-571-3453 and change certain payroll deductions automatically. Pamphlets with a cut out pocket card were mailed out through the JSC mail distribution system this week to give employees a better overview of how the system works and PIN numbers will begin to be mailed out to employees' home addresses the week of July 8.

"Implementation of systems such as Employee Express are helping us to overhaul the way we do business," said Wayne Draper, JSC's chief financial officer. "Employee Express demonstrates that we're on our way to providing employees with automated customer-service applications."

Employees will be able to change federal and state tax withholding, direct deposit of net pay, financial allotments, home address and PIN numbers without having to fill out forms and forwarding information to the appropriate office. The system was developed by an interagency task force chartered under the Office of Personnel Management.

"This is the first phase of a two-phase program," said John Beall, chief of JSC's Financial Management Division. "Phase 2 potentially includes the capabilities to modify health benefits, thrift savings plan, savings bonds, combined federal campaign contributions and county and city taxes."

For details on this system call the JSC Payroll Office at x34832.



JSC Photo by Benny Benavides

Children exploring the new Kids Space Place this week take the opportunity to use the second floor escape hatch with a helpful hand from "Gazer." The hatch, a circular two-story slide, is one way kids can return from missions on the second floor of Space Center Houston's newest attraction. Space Center Houston will host a JSC night next Friday to give JSC employees and their families an opportunity to explore the latest addition to the visitor's center.

## SCH hosts JSC night next week

By Natasha Calder

Space Center Houston is opening its doors for JSC employees, contractors, families and friends from 5-9 p.m. next Friday to offer them a first-hand look at the newest attraction, "Kids' Space Place."

This new addition, the first since SCH's opening in 1992, gives children and adults a hands-on learning experience through interactive exhibits and exercises, allowing them to explore different aspects of space exploration and the human space flight program.

"With the addition of Kids' Space Place,

Space Center Houston opens up the excitement of the space program to those who will guarantee its future—the children. In each and every activity area, the kids not only will have fun, but also will learn about space exploration and basic science and math concepts in a hands-on, user friendly atmosphere," said Richard Allen, Space Center Houston's general manager.

"We are doing NASA night because we want to share the newest attraction of Space Center Houston with NASA employees, so that they may share the experience of space

Please see **KIDS**, Page 4

## Atlantis rolling back against Bertha threat

By James Hartsfield

Atlantis, being readied for STS-79, was moved off the launch pad early Wednesday and rolled back to the Vehicle Assembly Bldg. due to the threat posed by Hurricane Bertha to Kennedy Space Center.

By mid-day Wednesday, Bertha was a Category 3 hurricane with sustained winds of 105 miles per hour. The hurricane was forecast to miss KSC and turn north toward the open Atlantic and middle East Coast, but, by Wednesday morning, it was continuing a track toward the Florida coast.

Although Atlantis could remain on schedule toward a launch of STS-79 on July 31 despite being moved back to the VAB, shuttle managers are continuing an evaluation of sooting found during STS-78 post-flight inspections of the solid rocket boosters' interior J-joints.

The J-joints are where rubber insulation on the interior of the solid rocket casings meets at each of the three field joints. Inspections of the STS-78 boosters found the rubber insulation charred in places and soot reaching near the actual field joint and the capture-feature O-ring. No gas leaked past the joint, and no damage was done to the capture feature O-ring, the first of three O-rings in each joint.

Although the J-joint was not designed to seal against pressure, it has always done so. One suspect is a new, water-based cleaner and adhesive used to coat the J-joint before the boosters are assembled. The water-based adhesive was used for the first time on STS-78, replacing a methyl-based adhesive that is no longer manufactured. The same new adhesive was used on STS-79's booster rockets.

Managers did opt to begin stacking the solid rocket boosters for STS-80 as quickly as possible, using supplies of the old adhesive that are still in stock at KSC. The STS-80 boosters could be used for STS-79 if it is decided to disassemble the current STS-79 boosters.

A final decision on the J-joint issue and the launch of STS-79 is not expected before early next week. If the schedule holds, Atlantis will lift off at 10:29 a.m. CDT July 31.

The crew—except for Mission Specialist John Blaha—will spend 8 days, 20 hours and 35 minutes in orbit. On arrival at Mir, Blaha will begin a work tour of four months as a cosmonaut researcher. Readdy, Blaha, Pilot Terry Wilcutt, and Mission Specialists Tom Akers, Jay Apt and Carl Walz, are scheduled to participate in a final countdown rehearsal next week.

## Lucid to break U. S. record of longest space flight Monday

Mir 21 Cosmonaut-Researcher Shannon Lucid is closing in on the record for the longest single space flight by a U.S. astronaut while science investigations continue on the Russian Mir Space Station.

Monday, Lucid will surpasses the U.S. record of 115 days in space, which was set last year by astronaut Norm Thagard as a member of the Mir 18 crew.

Meanwhile, Lucid and her crewmates, Mir 21 Commander Yuri Onufrienko and Flight Engineer Yuri Usachev, continue work with experiments and payloads aboard Mir.

The majority of the work done this week focused on the effects of the Mir station environment on various experiments and the search for possible ways to work around some of those influences. The crew continued using the Space Acceleration Measurement System unit to record what effect station operations are having on those experiments.

A Technical Evaluation of the Microgravity Isolation Mount, designed to try and minimize the acceleration effects experienced on the station so that delicate microgravity work can be performed, also was planned for this week.

Other tests included a neurological evaluation, done periodically during the Mir 21 flight as part of the Anticipatory Postural experiment, to monitor any alterations in a person's motor functions due to long-duration space flight, and more processing of the Candle Flame in Microgravity sample set done last week. The CFM work being done on Mir is similar to the work done on the space shuttle and involves studying a flame in a weightless environment.

Lucid was informed this week by the NASA operational team in the Russian Mission

Control Center of the sooting found in the J-seals of the solid rocket boosters used in the STS-78 launch. Lucid's return to Earth, which is planned for Aug. 9, will depend on whether the phenomenon is seen as a threat to Atlantis' planned July 31 launch.

Last week saw the completion of the Queen's University Experiment in Liquid Diffusion after the remaining four samples, which did not process properly on the first attempt, were re-processed successfully over the weekend.

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## Columbia sets record for longest shuttle flight

By Karen Schmidt

Columbia glided into Kennedy Space Center at 7:37 a.m. CDT Sunday after traveling more than seven million miles in space and setting a record for the longest shuttle flight so far.

Commander Tom Henricks, Pilot Kevin Kregel, Mission Specialists Susan Helms, Rich Linnehan and Chuck Brady and Payload Specialists Jean-Jacques Favier and Bob Thirsk returned to Earth with a record 16 day, 21 hour and 48 minute flight. Columbia surpassed the previous record set on STS-67 aboard Endeavour in March 1995 of 16 days, 15 hours and 9 minutes.

JSC Director George Abbey joined the crew's friends and co-

workers in welcoming the STS-78 crew back late Sunday.

"This mission really paved the way for space station," Abbey said. "It was a record setting flight, we had an international crew and I know it takes a lot of people to make a mission but it takes a great crew to make it all come together."

Henricks praised his crew's hard work throughout the record setting flight.

"We are glad to be back," Hendricks said. "Seventeen days sounds like a long time. I'm sure it seemed like forever for the folks in the MCC, but to us the time flew by. We had a crew that was not eager to come home. We worked real hard

Please see **STS-78**, Page 4



JSC Photo by Benny Benavides

JSC Director George Abbey, left, welcomes home STS-78 Commander Tom Henricks and his crew mates Sunday after setting a record for the longest shuttle flight.

## Career Plus program extended

The Careers Plus+ Retirement Incentive Program, which was designed to give retirement-eligible civil servants more options to consider when making career decisions, is extending its deadline.

Human Resources personnel report the program—now in its fifth month—has had positive feedback from retirement-eligible employees, both those who have chosen to take advantage of Careers Plus+ and those who have not.

"Because of the current legislative uncertainty about buyouts and because we want employees to have as much information as

Please see **CAREER**, Page 4





# Exploration Marathon

## STS-78 crew conducts variety of JSC tests to prepare for longer flights

**W**hile the record-setting 17-day mission of Space Shuttle *Columbia* ended Sunday, the research has only just begun as scientists at JSC and around the world begin sifting through the mountain of data STS-78 accumulated.

"Overall, in terms of life sciences, the information gathering has just been tremendous," said Victor Schneider, life and microgravity program scientist at NASA Headquarters.

"We have 41 principal investigators involved with the mission, and all but very few have 100 percent, if not 200 percent of the data they had hoped to collect," added Mission Scientist J. Patton Downey.

Two investigations aboard Spacelab originated with JSC researchers, who are anxious to begin reviewing the data.

The Canal and Otolith Integration Study, focused on the effects of microgravity on the vestibular system of the inner ear. Principal Investigator Millard Reschke of JSC's Space Biomedical Research Institute said this "basic science" could provide new clues about how the brain, the inner ear and eyes work together to orient people in their environment.

"We've gotten information and perceptions from the crew that we've never seen before," Reschke said. "Many times people believe what they see is really true, particularly with how they're oriented in their environment. We're finding that what they see may actually be completely opposite of what is true. The brain is taking the perception and making responses of the head and eye that compensate for perception."

In space, the vestibular system becomes confused as to which way is up and down, leading to nausea and disorientation. Using specially designed head gear and a target projection system to monitor head movement and eye coordination, crew members performed tests to determine how the head and eyes track visual and motion targets in microgravity.

The studies were included in the Voluntary Head Movements experiment and the Optokinetic Nystagmus experiment. During this investigation, crew members wore high-tech modified ski goggles, known as an optokinetic nystagmus apparatus, to help record their eye and head movements as they tracked illuminated targets.

Both experiments were performed pre-flight to establish a defined Earth-stable baseline, and are being repeated post-flight to track the

recovery process. Repeated measurements were made this past week for comparison to those obtained before and during the flight.

All of the data taken during the flight still is stored on tapes and has not been delivered to Reschke and his team. He said he hopes to have the tapes and begin evaluation within a week, but that already the comparison of pre-flight and post-flight measurements is yielding interesting results.

"We're looking primarily at the interaction of the visual and vestibular system in the pursuit tracking system. All of these things are needed to hold images stable in front of the eye, and all are relying on the inner ear to provide that," he said. "On post-flight data, we've seen extremely large changes in the ability of the crew to do this. This is verification that on a long flight these kinds of things are directly related to the duration of the flight."

Reschke said the experiment hardware performed exceptionally well, in particular the hardware provided through the French space agency, CNES. Co-investigators included Alain Berthoz, Centre National de la Recherche Scientifique/College de France, Paris; Gilles Clemons, CNRS, Toulouse, France; Bernard Cohen, Mount Sinai Medical Center; Makoto Igarashi, Nihon University in Tokyo; William Paloski, of the Space Biomedical Research Institute; and Donald Parker, University of Washington in Seattle.

Reschke said that, for the first time, the COIS researchers were able to follow the experiment protocols through television and photographic coverage, which provided visual verification that the protocols were being followed properly.

"The crew did exceptionally well," he said. "This crew in particular was asked to do a lot and they were really instrumental in carrying out science where they didn't have a lot of opportunity to interact with investigators for feedback. That was primarily due to their training, and one of the most dedicated payload commanders that we've ever worked with."

Reschke said the research has implications for many people on Earth who suffer from conditions that create dizziness and other perceptual problems. He said Oliver Sacks, the well known author of "The Man Who Mistook His Wife for a Hat?" and the doctor in the movie, "Awakenings," has said that the only way to truly understand problems of orientation, balance and the inner ear is to fly people in space and remove constant

gravitational stimulation.

Another JSC-based experiment, the Magnetic Resonance Imaging After Exposure to Microgravity, used two different body scanning systems to test the effects of microgravity on muscles and other tissues.

Principal Investigator Adrian LeBlanc, who works here at JSC with Krug Life Sciences, Methodist Hospital and Baylor College of Medicine, said researchers are looking for the causes of back pain some astronauts experience when in space and at ways of may help scientists fight certain muscle diseases and osteoporosis on Earth.

Working with him were co-investigators Linda Shackelford of JSC's Medical Sciences Division; Harlan Evans, also with Baylor and Krug Life Sciences; Chen Lin and Steward West of Baylor; and Thomas Hendrick of Methodist Hospital.

In the past, longer duration shuttle flights have revealed evidence of significant losses in calf, thigh and lower back muscles, and other tissues. Before and after this flight, researchers performed Magnetic Resonance Imaging, or MRI, and Dual Energy X-Ray Absorptiometry, or DEXA, scans on the crew members to document changes in the volume of individual muscles, the degree of atrophy and the rate of recovery to preflight status.

"We are also examining the changes in the intervertebral discs," said LeBlanc. "Astronauts report they are taller in space, which can in part be explained by expansion in these discs. We are trying to see the degree of disc expansion in microgravity and subsequent return to normal once back on Earth."

From this, LeBlanc said, researchers hope to improve their understanding of the causes of the back pain reported by some crew members on orbit.

"We are also measuring marrow composition which may be related to red cell mass changes seen in previous space flights," he said.

The MRI and DEXA scans were performed 60 and 30 days before launch and were repeated on landing day, and again between 40 and 72 hours. They'll be repeated two weeks from landing, and again between four and five weeks after the mission's end.

The JSC experiments were just two of the 41 investigations aboard *Columbia*. An international team of researchers from NASA, the European Space Agency and colleges and universities across the United States, Canada and Europe monitored and remotely controlled many of the experiments as the

crew helped conduct or process them. This was the most extensive use of "remote tele-science" in shuttle program's history.

According to Mission Manager Mark Boudreaux, the ability of investigators to remotely control and monitor experiments from four remote European and four remote domestic locations is a key aspect of the upcoming International Space Station era. Thanks to Spacelab, scientists can plan on using the now proven technology to manipulate experiments in space from their own research centers.

Information gathered aboard STS-78 from the life sciences experiments aboard Spacelab will prove vital to future science missions as well as life aboard space station.

Numerous experiments meant to gather information on muscle strength, endurance, mental fatigue, muscle tissue loss and sleep cycles were conducted on orbit.

Researchers can now compare the results with the baseline information gathered while the crew was on Earth to determine the physiological effects of living in a microgravity environment.

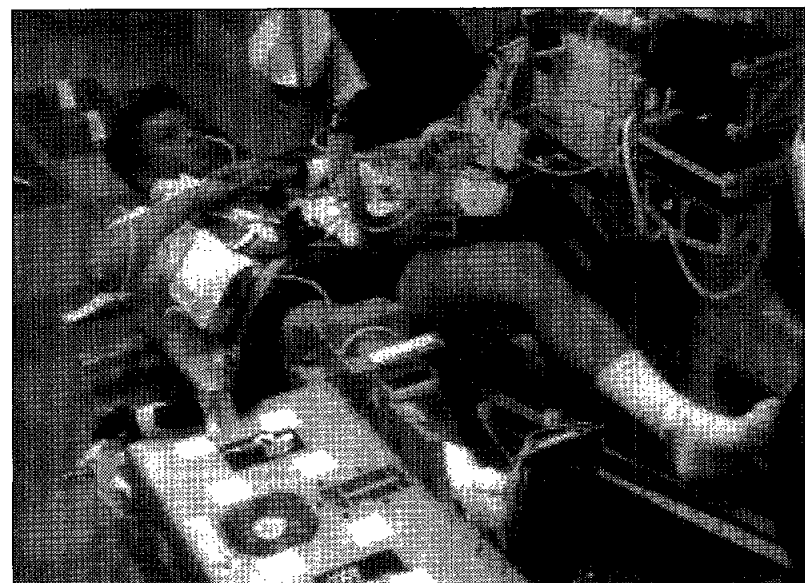
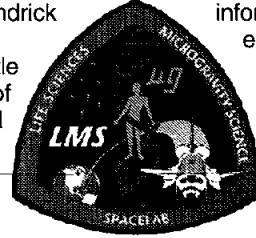
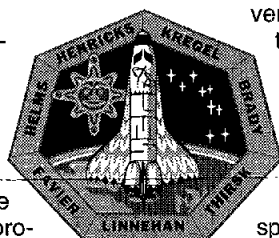
Investigators will gain insight on how to develop ways to help astronauts maintain their muscle strength and endurance not only on shuttle missions, but also during future long duration mission aboard space station or, perhaps someday, a mission to Mars.

STS-78 marked the first time researchers collected biopsy muscle tissue from crew members both before and after the flight. Crew members provided muscle biopsy samples and underwent MRI and DEXA scans almost immediately after landing at Kennedy Space Center.

The findings from the comparison of biopsy samples, along with the musculoskeletal tests conducted on orbit, may help scientists develop measures to reduce in-flight muscle atrophy and also combat muscle disease and osteoporosis on Earth.

Another vital "first" on this mission was the beaming of video images to the shuttle to help crew members perform in-flight maintenance procedures. Engineers at JSC worked with private vendors to adapt a commercial video teleconferencing software to the shuttle Ku-band communications system, which allowed for the two-way transmissions.

"The video conferencing has really been outstanding," Pilot Kevin Kregel reported. "We used it to fix the Bubble Drop and Particle Unit Experiment, and it made fixes a lot easier." □



**Above: Mission Specialist Rick Linnehan, assisted by Payload Commander Susan Helms, participates on-orbit in the JSC-based Canal and Otolith Integration Study investigation, a neuroscience experiment, studying changes in the coordination of head and eye movements associated with adaptation to microgravity. Bottom left: Canadian Payload Specialist Bob Thirsk uses the Torque Velocity Dynamometer during the mission to measure the mechanical power of arm and leg muscles. Bottom right: French Payload Specialist Jean-Jacques Favier, wearing the Torso Rotation Experiment device, completes a neuroscience experiment as he monitors rotational movements of the eye, head and upper torso to determine if the normal activity patterns are changed as a result of prolonged exposure to weightlessness.**

# Cameron to leave astronaut corps for Hughes

Shuttle Astronaut Ken Cameron will depart NASA and the astronaut corps on Aug. 5 to pursue other career interests.

Cameron, selected as an astronaut in 1984 and a three-time shuttle veteran, will join Hughes Training, Inc., as executive director, Houston Operations.

"Ken's contributions to the astronaut office and to NASA have been valuable," said David Leestma, director of Flight Crew Operations. "He was instrumental in setting up

the support system for NASA astronauts training in Russia. We wish him well in his new career."

Cameron served as the first NASA Director of Operations in Star City, Moscow, where he worked with the Cosmonaut Training Center staff to set up a support system for astronaut operations and training in Star City, and received Russian training in Soyuz and Mir spacecraft systems, and flight training in Russian L-39 aircraft.

Cameron has logged over 561

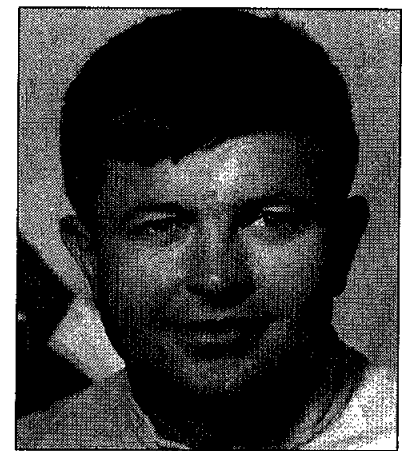
hours in space. He served as pilot on STS-37 in 1991, commander on STS-56 in 1993 and STS-74 in 1994.

Cameron flew his first mission as pilot on STS-37. This mission—launched on April 5, 1991—featured the deployment of the Gamma Ray Observatory for the purpose of exploring gamma ray sources throughout the universe.

On his second mission, Cameron was commander of STS-56, carrying ATLAS-2. During this nine-day

mission, the crew of *Discovery* conducted atmospheric and solar studies in order to better understand the effect of solar activity on the Earth's climate and environment, and deployed and retrieved the autonomous observatory Spartan.

Cameron commanded STS-74, NASA's second mission to rendezvous and dock with the Russian Mir Space Station, and the first mission to use the shuttle to assemble a module and attach it to a space station.



Ken Cameron

## Test subjects needed for life sciences

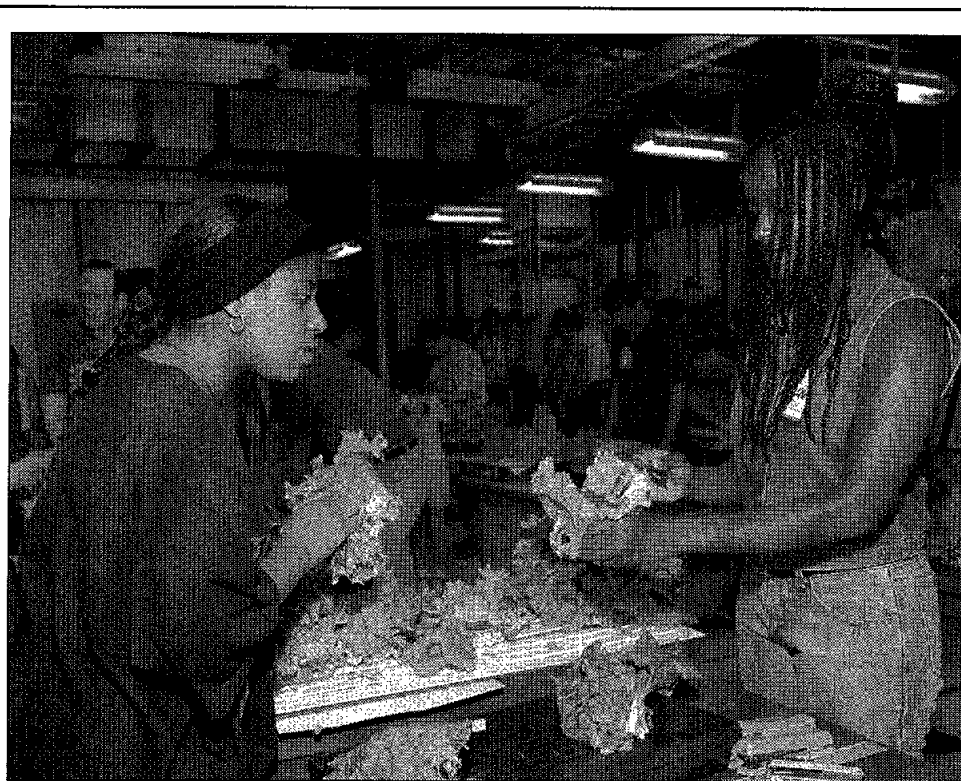
JSC's Medical Sciences Division is looking for test subjects to study the effects of strength gain during exercise.

"A Comparison of Strength Gains Following Different Combined Concentric and Eccentric Exercise Regimens," will focus on which of three eccentric/concentric exercise programs will lead to the greatest strength gain in muscles.

Subjects will train the lower right extremity quadriceps femoris muscle on the Lido dynamometer three days per week for five weeks. Strength measurements will be obtained before and after the training protocol.

"The purpose of this test is to help determine the best exercise program for astronauts in space," said Patricia Hilliard, coordinator of the study. "We want to give the astronauts an exercise program that can give them the best possible benefit so they can concentrate on their job and not worry about their bodies."

Subjects should be between the ages of 25-50 with no weight training for at least one month before the study with running limited to 12 miles per week. For more information call Patricia Hilliard at x42039.



JSC Photo by Robert Markowitz

**WHERE'S THE DRESSING?**—From left, Casey Johnson and Tangeneare Ward, summer interns from Tuskegee University, assist scientists and engineers from the Crew and Thermal System Division process lettuce grown at an atmospheric pressure equivalent to about 10,000 feet. The crop, planted in the Variable Pressure Growth Chamber, is being used to study the effects of reduced cabin atmosphere on crop physiology and yield. Future long-duration exploration missions, which may utilize crop plants for bio-regenerative life support, may operate at reduced atmospheric pressure to save mass. A second test will be initiated later this month using wheat. The tests are being performed with the guidance of Kenneth Corey, a visiting scientist from the University of Massachusetts at Amherst, and Daniel Barta of Crew and Thermal Systems Division. Some of the harvested lettuce was given to the four volunteers involved in the Early Human Testing Initiative 30-day test which ends today.

## STS-78 crew praises ground, orbit teamwork

(Continued from Page 1)

the first few days. We worked real hard the last couple of days and four of these guys are still working. We had science that involved doing everything from collecting your saliva to collecting blood to checking on the health of rats, to looking at fish embryos. These guys made it so easy."

Favier reflected on his first space experience.

"It was for me a very unique experience," Favier said. "The whole crew was so terrific. It was my first flight and I'm sure one of the greatest experiences of my life."

Thirsk talked about the future on the International Space Station and how this flight is a mirror to those future flights.

"What we have shown in the last 17 days is something that you're going to see in the future on the space station as well," said Thirsk, "when you put together dedicated scientists, an enthusiastic crew, ingenious engineers, NASA resolve and international cooperation, you got a formula for success."

Brady praised his team mates and the NASA family on what an honor it was to be part of the program.

"The people I am looking at right now are my heroes," Brady said. "NASA has meant something to myself and my family and my community I came from for years and years. It was an honor to

serve with this crew—tremendous people, tremendous spirit, tremendous camaraderie, tremendous heart and I would just like to tell you the honor was mine."

Linnehan said he wished all of his co-workers could have shared in the experience.

"It was an incredible experience and one that I wish all of you could share with me," said Linnehan "I couldn't have done any of it without you or your support. We got all the science accomplished, perhaps a little more than they thought we would."

Kregel praised his payload commander for keeping the science on track.

"We came back with all the science that we needed," Kregel said, "and I think all the scientists will agree that we came back with not 100 percent mission but over 100 percent mission and a lot of it has to do with Susan."

Helms commended the payload crew members for their outstanding efforts during the flight.

"You can try to put a flight together to get something done, but it won't work unless you got a crew that is willing to knock themselves out to get the science and throw themselves into the effort wholeheartedly," Helms said. "There is no question these guys did that. The results are going to be incredible."

## Career options deadline extended

(Continued from Page 1)

possible before they make important retirement decisions, we are extending the deadline to Oct. 3," said Harvey Hartman, director of JSC's Human Resources Office. "We hope this extension gives interested employees the additional time and information they need as they make retirement choices."

The Partners in Education and Partners in Technology programs were due to expire June 30 and Aug. 30, respectively, and now have been extended to the Oct. 3 deadline. All four programs will expire on the October date.

Employees with questions on any aspect of the Careers Plus+ Program can contact their Human Resources representatives. Questions about retirement calculations should be addressed to Employee Services at x32681.

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## Kids' Space Place offers entertainment variety

(Continued from Page 1)

with their kids and with our kids," said Debi Matthews, Space Center Houston's group sales coordinator. "We want them to have a special night where they can introduce their children to space and what they do for a living."

The Lunar Jumper exhibit is one of the many attractions being offered in this new exhibit and is the first of its kind anywhere. Once strapped into the lunar jumper harness, guests will experience what it would be like to move around on the moon that is one-sixth-of-the-Earth's gravity, simulated by a system of cables and compressed air. Created especially for Kids' Space Place, it is the closest most people will ever come to walking on the moon.

Another highlight for the children is a replica of the actual vehicle astronauts used to roam the surface of the moon. A monitor in front

of the vehicle playing a moving landscape, coupled with a vibrating seat to simulate the rumbling over a lunar landscape and a moving power throttle, will give children the feel of what it is like to drive on the moon.

Other exhibits require the children, each with a mission book, to work with other children throughout the area to complete a set of activities in Mission Kidrol, the Space Shuttle, the Apollo Command Module and the Space Station. These interactive exhibits not only give guests an opportunity to see the type of work done in each of these areas of the space program, but also provide an opportunity to learn the importance of flight and ground crews working as a team.

The Rocket Launcher is another exhibit that provides an ideal way for young space enthusiasts to get a hands-on idea of how a rocket

launch actually works. Children will control the launch from start to finish, launching a rocket, amid warning lights and sounds, to the five story ceiling of the center.

Children also will have the chance to become spacecraft designers, utilizing a computer program that will instruct them on how to actually build a multi-stage rocket.

Numerous other attractions will allow children to experience the effects of wind resistance, the frictionless environment of space and the effects of the different gravitational pulls on planets in the solar system.

On NASA night, JSC employees are admitted free when they show their badges, and may bring up to four guests at a cost of \$5 per person. Badged contractors and up to four guests will be admitted at a cost of \$5 each. Children under three will be admitted free.

## Former astronaut Aldrin to introduce new book

Apollo astronaut Buzz Aldrin, in collaboration with author John Barnes, has written a new science fiction novel, "Encounter with Tiber."

Aldrin will be in Houston on July 24 signing copies of the book from 3:30-5:30 p.m. at Jeremy's Bookshelf, 2441 Bay Area Blvd., and from 6:30-8 p.m. at Future Vision Books, 10570 Northwest Freeway.

"Encounter with Tiber" chronicles the adventures of three tenacious explorers who come into contact with the Tiberians during their space explorations. The Tiberians were, according to the novel, ancient astronauts whose technology enabled them to colonize Mars and lay the groundwork for humans to carry on the exploration of space long after they were extinct.

For further information, contact Jeremy's Bookstore at 486-8028 or Future Visions Books at 682-4212.

## Computer seminar to focus on systems development

Logicon Inc., and Federal Computer Week are hosting a Federal Information Technology Seminar from 8 a.m.-5 p.m. July 30 at the Radisson Hotel Downtown in San Antonio.

This free one-day seminar will feature exhibits by leading vendors for government information systems and management professionals. Featured speakers include Edith Holmes, publisher of Federal Computer Week, and Col. Ronald Casey of the U.S. Air Force.

JSC civil servants may attend the seminar by filling out a JSC Form 75 and submitting it for approval.

For more information call Glen Van Zandt at x33069 or 1-800-I-CASE-US.

## Russians celebrate July 4th

(Continued from Page 1)

Meanwhile, astronaut John Blaha is back in Houston undergoing final preparations for STS-79 which will deliver him to Mir for an expected four-month stay as a cosmonaut researcher. Astronaut Jerry Linenger also completed his final runs in the Mir and Soyuz simulators with the Mir-22 backup crew last week.

All of the Americans in Star City took advantage of the non-work day on July 3 to celebrate the 4th of July by hosting a picnic for the Russians. A variety of American traditions were demonstrated, including hamburgers, hot dogs, baked beans and apple pie.

## Corrections

A story in the July 5 edition of Space News Roundup incorrectly stated that STS-79 would be the first shuttle retrieval of an American from the Mir Space station. Cosmonaut Norm Thagard was retrieved from Mir by the Space Shuttle *Atlantis* in 1995. In addition, a typographical error listed *Atlantis'* launch time as 10:29 a.m. CDT July 31 instead of 10:29 p.m.

A story in the same edition about JSC's receipt of several 1996 Telly Awards failed to include reference to the writer and producer of Taft Broadcasting's "Microgravity" program, Emmett Durham.